



[Billing Code 4140-01-P]

DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Government-Owned Invention; Availability for Licensing

AGENCY: National Institutes of Health, HHS.

ACTION: Notice.

SUMMARY: The invention listed below is owned by an agency of the U.S.

Government and is available for licensing in the U.S. in accordance with 35 U.S.C. 209 and 37 CFR Part 404 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

FOR FURTHER INFORMATION CONTACT: Licensing information may be obtained by communicating with the indicated licensing contact at the Technology Transfer and Intellectual Property Office, National Institute of Allergy and Infectious Diseases, 5601 Fishers Lane, Rockville, MD, 20852; tel. 301-496-2644. A signed Confidential Disclosure Agreement will be required to receive copies of unpublished scientific data.

SUPPLEMENTARY INFORMATION: Technology description follows.

A Human Progenitor Mast Cell Line for Allergic and Fibrotic Research and Therapeutic Screening

Description of Technology:

Hermansky-Pudlak Syndrome type-1 (HPS-1) is a rare genetic disorder that affects around 1 in 500,000 people worldwide and 1 in 1,800 Puerto Ricans. Patients with HPS-1 display oculocutaneous albinism, bleeding due to platelet abnormality, and pulmonary fibrosis. Those that develop pulmonary fibrosis often succumb and live no more than a decade after early onset of breathing problems.

Scientists at the National Institute of Allergy and Infectious Diseases (NIAID) have developed the HPS-1 proMastocyte (HPM) cell line, containing an HPS-1 mutation. This cell line resembles a progenitor mast cell with reduced granule formation, significant chemotactic ability, and is the first mast cell line shown to constitutively release cytokines, chemokines, and most importantly fibrotic proteins. This cell line serves as a model to study granule formation, early mast cell development, chemotaxis and mechanisms controlling synthesis of molecules contributing to fibrosis.

The cell line is available as live cells approximately 3-4 million cells per sample in a T25 Flask.

Potential Commercial Applications:

- A tool to further understand fibrosis
- A tool to study granule formation, early mast cell development, degranulation and chemotaxis

- Screening tool to identify target compounds for the treatment of pulmonary fibrosis

Competitive Advantages:

- First progenitor mast cell line known to produce fibrotic elements
- Progenitor mast cell line with rapid growth, no cytokine stimulation needed. Cell doubling time of 2–3 days

Inventors: Arnold S. Kirchenbaum and Dean D. Metcalfe, both of NIAID

Publications:

Kirshenbaum AS et al. Immunophenotypic and Ultrastructural Analysis of Mast Cells in Hermansky-Pudlak Syndrome Type-1: A Possible Connection to Pulmonary Fibrosis.; PLoS One. 2016, Jul 26;11(7):e0159177, PMID 27459687

Intellectual Property: HHS Reference No. E-270-2016/0

Available as a Biological Material

Licensing Contact: Dr. Benjamin Hurley, (240) 669-5092, benjamin.hurley@nih.gov .

Collaborative Research Opportunity: The National Institute of Allergy and Infectious Diseases is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate or commercialize this invention.

For collaboration opportunities, please contact Dr. Dianca Finch; 240-669-5503, dianca.finch@nih.gov.

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Suzanne Frisbie, Ph.D.

Deputy Director

Technology Transfer and Intellectual Property Office

National Institute of Allergy and Infectious Diseases

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